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Simoes

[45] **Date of Patent:** \*Apr. 4, 2000[54] **INSTRUMENT FOR THE MEDICAL OR DENTAL TREATMENT OF CHILDREN**[56] **References Cited**

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[\*] **Notice:** This patent issued on a continued prosecution application filed under 37 CFR 1.53(d), and is subject to the twenty year patent term provisions of 35 U.S.C. 154(a)(2).

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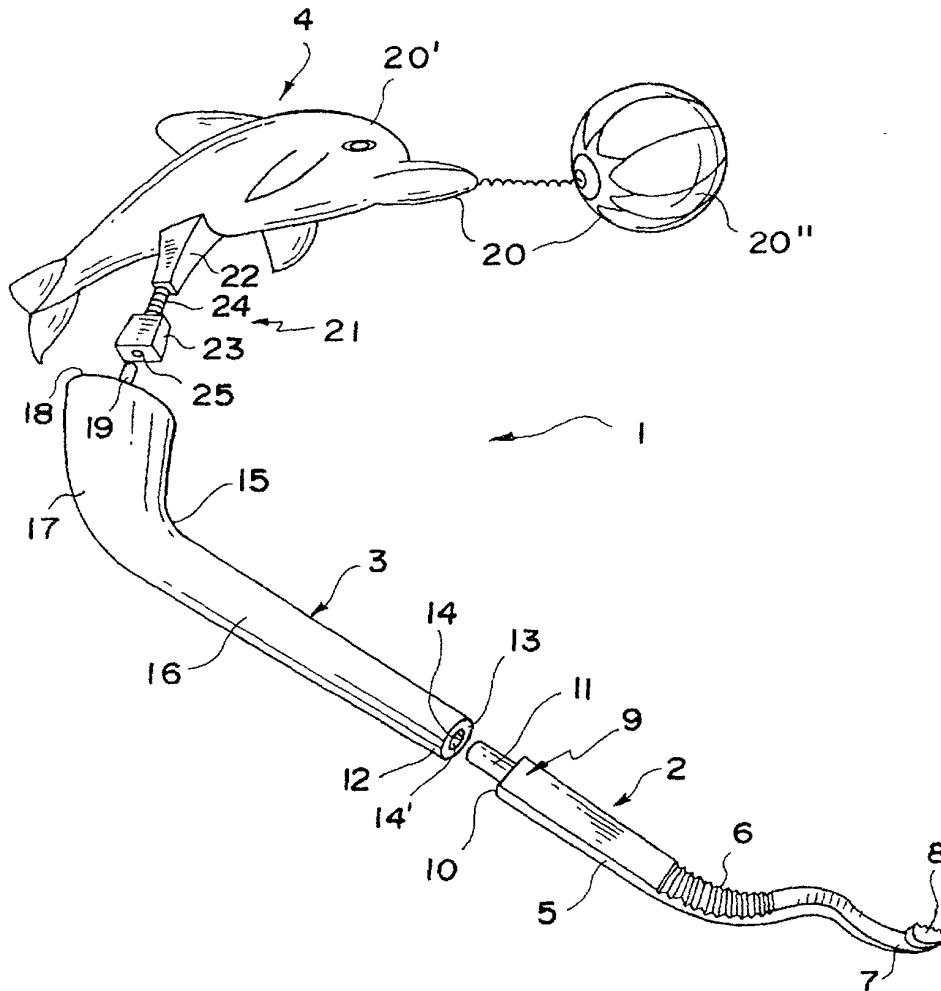
[21] **Appl. No.:** 09/135,486[57] **ABSTRACT**[22] **Filed:** Aug. 18, 1998

An instrument for the medical or dental treatment of children having a treatment element with a tool at one end and a handle with a free end to which a toy element is fastened. The toy element is provided with at least one toy which is visible by the children during treatment.

[51] **Int. Cl.<sup>7</sup>** ..... A61C 3/00[52] **U.S. Cl.** ..... 433/141; 433/147; 15/167.1

[58] **Field of Search** ..... 433/141, 143, 433/144, 147, 29, 77; 15/167.1, 145; D4/107, 125; 600/200, 104, 139; 446/72, 27

19 Claims, 4 Drawing Sheets



# INSTRUMENT FOR THE MEDICAL OR DENTAL TREATMENT OF CHILDREN

## FIELD OF THE INVENTION

The present invention relates to an instrument for the medical or dental treatment of children, having a treatment element, which has a tool and a handle adjoining the latter.

## BACKGROUND OF THE INVENTION

Many children become so scared by medical treatment as such, and in particular by the shining chromed medical instruments, that they refuse all cooperation in the healing treatment or in preventive treatment of illnesses. On the one hand, this makes it difficult for a physician to deal with his small patients. On the other hand it is also difficult to introduce the children to medical treatment or preventive measures for health care in the private sphere. Therefore physicians and parents need to take pedagogic steps to free children of this fear.

## SUMMARY OF THE INVENTION

It is therefore an object of the present invention to further develop a device of the above mentioned type in a way which does not act as a deterrent to children, but still fully meets the intended functions.

The attainment consists in that the instrument has a toy element with a least one toy at the free end of the handle.

By means of the "child-friendly designed instrument" in accordance with the present invention, the children are on the one hand distracted by play, so that their fear of medical treatment is at least reduced. By removal of the fear of the children, the device of the present invention simultaneously fulfills a pedagogic purpose, since the children are introduced to medical treatments and health care without fear or rejection even arising.

In an advantageous manner the toy element can be removed from the toy and/or from the handle of the treatment element. In this way both parts can be produced separately and freely combined with each other.

It is of advantage for the handling ease of the instrument in accordance with the present invention, if the toy element is connected with the handle of the instrument via an extension element, because this gives the physician greater freedom of movement, so that the additionally attached toy element does not interfere with the treatment. An elastic element on the toy element, or respectively on the toy, for example in the form of a spring, serves the same purpose. In addition, a jiggling, moving toy distracts the children even more and perhaps even encourages them to play, without the treating physician needing to interrupt his treatment every time.

The type of toy is completely optional and depends on personal preferences, but also on the ease of handling, so that an upper limit must be assumed regarding the size of the toy element. Otherwise the designer is free to choose. For example, it is possible to make use of representations of animals, fairy tale figures, figures from comics or animated films, whose popularity with children is also a matter of fashions.

For hygienic reasons the elements of the instrument are preferably made of plastic material or hard rubber, wherein there are no limitations placed on the material used. Which plastic material, or respectively which hard rubber is used is primarily a function of the use of the instrument, i.e. how hard and resistant, or respectively how flexible it needs to be.

Instruments made of plastic material or hard rubber are mostly disposable materials, which are subsequently discarded. In this case the use of hard rubber has the advantage that the disposal is simpler from the viewpoint of ecology.

But the actual treatment element, or respectively the extension element, can also be made of metal, so that they can be sterilized and used again. This reveals another particular advantage of the multi-part design of the instrument in accordance with the present invention, i.e. the fact that after each treatment the toy element can be separated from the actual treatment element and fastened again on a new treatment element. It is possible to connect the instruments in accordance with the present invention in the way they are actually needed and in this way they can be adapted to any type of treatment—and also to the preferences of the children.

Depending on the design, all elements, even the toy element, can be conceived as disposable articles.

Basically the instrument in accordance with the present invention is suitable for all medical and dental treatments of children. It is particularly designed for instrument which are themselves relatively small and which generate a definite fear in children. Examples are in dentistry the many dental instruments, but also instruments which are used by an ophthalmologist, or an ear, nose and throat specialist, or the family physician.

An exemplary embodiment of the present invention will be described in more detail in what follows by means of the attached drawings.

## BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1a, an instrument in accordance with the present invention in an exploded view is shown;

FIG. 1b, another instrument in accordance with the present invention in an exploded view is shown; and

FIGS. 2a to 2e, show, by way of example, some treatment elements for the dental treatment of children.

## DESCRIPTION OF THE PREFERRED EMBODIMENTS

The present invention will be described in what follows by means of an example of dental instruments for children. However, this is not intended as a limitation to such instruments. It is possible to design instruments of all types in accordance with the present invention.

In the exemplary embodiment, the instrument 1 in accordance with the present invention consists of three parts. Besides the actual treatment element 2, it has an extension element 3 and a toy element 4. Here, the extension element 3 is not an absolutely required component, but it is advantageous for placing the toy element 4 at a greater distance from the treatment element 2, so that the physician is not being hampered in his work.

The treatment element 2 essentially consists of a bent or kinked handle 5 with grooves 6 for better handling. At its end 7, the handle 5 ends in the actual tool 8, here for dental treatment. The handle 5 tapers here in the direction toward the tool 8. Therefore the somewhat thicker free end 9 of the handle 5 has a flat front face 10, to the center of which a cylindrical cap 11 has been applied. In this case, the cap 11 is of one piece with the handle 5.

The extension element 3 is plugged into the treatment element 2. On its lower free end 12 the extension element 3 has a circular diameter. The free end 12 constitutes a front face 14 having a bore 14', whose diameter is of such a size